MEETING SUMMARY for MERCURY WORK GROUP

Date: June 11, 2003
9:00 am –11:00 am
Location: IGCN
Conference Room D
Indianapolis, IN

Present at the meeting:
Tom Barnett (Ispat Inland Steel), Jack Corpuz (Heritage Environmental), John Fekete (Ispat Inland Steel), Eric Fry (B.B. Coal), Kevin Hoge (Nisource), Tom Neltner (Improving Kids' Environment), Dan Olson (Michigan City Sanitary District), and Paul Werderitch (City of Indianapolis).
Participating by way of conference call were Robin Garibay (The Advent Group), Tim Lohner (AEP), Dave Pfeifer (EPA), and Charlotte Read (environmental representative).
Representing IDEM were John Donnellan, Meredith Kostek, Steve Roush, Paula Smith, and Bobbi Steiff, and MaryAnn Stevens.

Acceptance of meeting minutes
The May 8, 2003 meeting minutes were accepted by the workgroup. The minutes are posted on the IDEM, Office of Water Quality's Mercury website, a part of the total Triennial Review website.

Approval of the Workplan
The workgroup decided that the workplan should be considered a living document to be changed or updated as needed. Comments on the workplan can be submitted to IDEM and revisions to the workplan will be highlighted and presented to the next planned workgroup meeting. The workplan is posted on the IDEM, Office of Water Quality's Mercury website, a part of the total Triennial Review website.

Representation at the June Steering Committee Meeting
John Fekete volunteered to give the mercury workgroup's update to the June 25th Triennial Steering Committee meeting.

Discussion topics
The workgroup focused on discussing the papers and materials the members provided in response to the assignments made at the May 8th meeting.

1. Robin Garibay presented the summary that The Advent Group has put together regarding its understanding of what other Region 5 states are doing about mercury permitting. Refer to Attachment 1 that Robin generously provided as an overview of her meeting presentation.

Several times in previous meetings, the question has arisen as to whether Ohio has actually issued a permit with a mercury variance. Today, Tim Lohner stated that Ohio has issued a permit containing a mercury variance in the Lake Erie Basin. Tim did not know if the variance was approved by EPA or if the variance was issued under a rule approved by EPA.

2. There was discussion about noncontact cooling water and reasonable potential to exceed as well as on pollutant minimization programs being treated differently by POTWs and industry. The workgroup agreed that there is not a correlation between the influent concentration and the effluent concentration at sewage treatment plants. Tom Neltner made the point that cities with CSO, SSO, and bypasses should be made a priority setting factor for permit renewal since they will be discharging mercury at the elevated levels found in untreated wastewater. Steve Roush made the point that reducing the influent levels of mercury should reduce the level of mercury found in the sludge, and that is important because the sludge is either land applied or incinerated and both of those practices release mercury back into the environment. Steve also asked the workgroup members if they would like to start a list of the important facts the group has discovered and anything else that has been agreed upon.

3. Meredith provided a document concerning the states within Region 5 and their variance rules or procedures. Illinois and Minnesota do not have multiple discharger variance provisions in their rules; Michigan and Ohio do. Wisconsin has the ability to set alternative mercury effluent limitations. Indiana drafted language similar to Ohio during the 1999 Triennial Review rulemaking, but that rule effort was abandoned to be taken up in the ongoing Triennial Review.

4. Paul Werderitch, with Robin Garibay's assistance, gave the presentation of the material John Chavez researched having to do with removal efficiencies of conventional treatment. Removal rates of 98.4% and 99.2% were stated for Indianapolis and Valparaiso. Valpo has tertiary treatment. Activated sludge treatment does nothing specifically to control mercury removal. Any metal not in a soluble state receives only incidental removal. GLI procedures are not designed to apply to storm water only to continuous discharge. The question was raised whether any of the Indianapolis sampling occurred during wet weather. There is a recognition that antidegradation is not to be a deterrent to CSO control. Dan Olson of Michigan City contributed that he doesn't think a pollutant minimization program should be more important for a CSO community than for a nonCSO community.

To Do List

- What do we do with all the collected information?
- How do we proceed with rulemaking?
- Dave Pfeifer is to provide the biological evaluation EPA is currently doing on Michigan rules.
- Steve Roush is to investigate the pretreatment role in mercury treatment and removal.
- Steering Committee update from John Fekete
- Larry Wu to discuss the public participation plan

Next meeting

The next meeting is scheduled for July 9, 2003, from 9:30 to 11:30 A.M., at IGCN, Twelfth Floor, Conference Room D.

ATTACHMENT

From: "Robin Garibay" <r.garibay@adventgrp.com>
To: <psmith@dem.state.in.us>, <sroush@dem.state.in.us>
Date: 6/11/03 12:43PM
Subject: POTW Removal Efficiencies

To aid with drafting minutes...

BEFORE METHOD 1631 (MDLs between 100 ng/L and 600 ng/L)

Based on the December 1987 USEPA "Guidance Manual on the Development and Implementation of Local Discharge Limitations under the Pretreatment Program," the removal efficiencies for total mercury using activated sludge treatment (25 POTWs) were:
∀ Second Decile: 50% removal
∀ Median: 60% removal

POTWs designed for primary treatment, trickling filters, or tertiary treatment (e.g., microscreening, filtration, post-aeration, nitrification/denitrification) were surveyed as part of the 1987 USEPA guidance. The removal efficiencies achieved for total mercury were:
∀ Primary Treatment Median: 10%
∀ Trickling Filter Treatment Median: 50%
∀ With Tertiary Treatment Median: 67%

The USEPA 1994 Risk Reduction Engineering Laboratory treatability database presents removal efficiencies for activated sludge POTWs (493 data points) with an average of 70% for influents between 100 ng/L and 100,000 ng/L.

POST METHOD 1631 (MDL between 0.1 ng/L and 0.3 ng/L)

Using Method 1631, recent City of Indianapolis (activated sludge facilities, 8 sample events) data indicate a median removal of 98.4% with an influent mean of 362 ng/L. The recent Method 1631 mercury monitoring data for the City of Valparaiso (activated sludge with tertiary clarifiers, 118 sample events) indicate a median removal of 99.2% with an influent mean of 146 ng/L.

From the Feb 1, 1999 "Mercury in Wastewater: Discharges to the Waters of the State" report prepared by the Maine Department of Environmental Protection and submitted to the state legislative Joint Standing Committee on Natural Resources. (page 14 of 51):

Average Hg concentration of raw municipal wastewater = 297 ppt

Average Hg concentration in secondary treatment POTWs = 11.3 ppt
Average Hg removal efficiency = 96%

From AMSA, 2002, pages 16, 17, and 18 "Mercury Source Control and Pollution Prevention Program Evaluation, Final Report"
{attached in case y'all don't have it}

Sacremento Regional County Sanitation District (secondary trtmnt)
and
Western Lake Superior Sanitary District (secondary trtmnt followed by mixed media filters)
range of removal efficiencies 96% to 99%

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